

A RADIO ARCHITECTURE FOR USE WITH FREQUENCY DIVISION DUPLEXED SYSTEMS

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ABSTRACT OF THE DISCLOSURE

A radio such as a frequency division duplex (FDD) radio (100) has a first local
10 oscillator (LO_1I and LO_1Q) that is set to coincide with the transmitter section's (126)
center frequency or a sub-harmonic thereof. In this way, after the first down-conversion,
the transmit interferer is converted to DC, where it can be effectively removed using a
simple high-pass filter (110, 112) such as a DC blocking capacitor. Image rejection is
achieved by the use of a two-step down-conversion approach that uses quadrature local
15 oscillators to implement a single-sideband down-converter.